SUMO®

SMK36GEN

1100w PORTABLE GENERATOR

SAFETY AND OPERATING MANUAL

12 month Full Manufacturer's Warranty

Congratulations on your purchase of a Sumo generator. We want you to continue getting the best performance from it so this handbook includes information on safety, handling and care. Please retain this handbook in case you need to refer to any of the information in the future.

Your Sumo generator comes with a 12-month guarantee, so should it develop a fault within this period contact your retailer.

GUARANTEE

This Sumo product carries a guarantee of 12 months. If your product develops a fault within this period, you should, in the first instance contact the retailer where the item was purchased. This guarantee specifically excludes losses caused due to:

- Fair wear and tear
- Misuse or abuse
- Lack of routine maintenance
- Failure of consumable items (such as batteries)
- Accidental damage
- Cosmetic damage
- Failure to follow manufacturer's guidelines
- Loss of use of the goods

This guarantee does not affect your statutory rights. This guarantee is only valid in the UK.

PLEASE NOTE:

The generator supplied is **NOT** suitable for providing power to any electronic products such as computers, laptops or televisions etc.

If in doubt please refer to the specific product manual for advice on supply connection. If using for a caravan, motor home or boat etc refer to the manufacturers manual regarding connection of a generator.

Do **NOT** connect into a house ring main circuit.

SAFETY INSTRUCTIONS

WARNING! Read all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

SAVE THESE INSTRUCTIONS

1) **Work area**

a) **Keep work area clean and well lit.** *Cluttered and dark areas invite accidents.*

b) **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** *Power tools create sparks which may ignite the dust or fumes.*

c) **Keep children and bystanders away while operating a power tool.** *Distractions can cause you to lose control.*

2) Electrical safety

a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** *Unmodified plugs and matching outlets will reduce risk of electric shock.*

b) **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** *There is an increased risk of electric shock if your body is earthed or grounded.*

c) **Do not expose power tools to rain or wet conditions.** *Water entering a power tool will increase the risk of electric shock.*

d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** *Damaged or entangled cords increase the risk of electric shock.*

e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** *Use of a cord suitable for outdoor use reduces the risk of electric shock.*

3) **Personal safety**

a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** *A moment of inattention while operating power tools may result in serious personal injury.*

b) **Use safety equipment. Always wear eye protection.** *Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.*

c) **Avoid accidental starting. Ensure the switch is in the off position before plugging in.** *Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.*

d) **Remove any adjusting key or wrench before turning the power tool on.** *A wrench or a key left attached to a rotating part of the power tool may result in personal injury.*

e) **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the power tool in unexpected situations.*

f) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** *Loose clothes, jewellery or long hair can be caught in moving parts.*

g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** *Use of these devices can reduce dust related hazards.*

4) **Power tool use and care**

a) **Do not force the power tool. Use the correct power tool for your application**. *The correct power tool will do the job better and safer at the rate for which it was designed.*

b) **Do not use the power tool if the switch does not turn it on and off.** *Any power tool that cannot be controlled with the switch is dangerous and must be repaired.*

c) **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools.** *Such preventive safety measures reduce the risk of starting the power tool accidentally.*

d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** *Power tools are dangerous in the hands of untrained users.*

e) **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use.** *Many accidents are caused by poorly maintained power tools.*

f) **Keep cutting tools sharp and clean.** *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*

g) **Use the power tool, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed.** *Use of the power tool for operations different from intended could result in a hazardous situation.*

5) **Service**

a) **Have your power tool serviced by a qualified repair person using only identical replacement parts.** *This will ensure that the safety of the power tool is maintained.*

ADDITIONAL SAFETY INSTRUCTIONS FOR YOUR GENERATOR

Electrical generators must always be grounded, (connected to earth).
Petrol or diesel powered generators must never be used in an unventilated closed spaces. The exhaust fumes are highly dangerous and can cause "Carbon Monoxide Poisoning" which will cause drowsiness and death.
The generator must be mounted on a firm level surface.
The electrical output load must not exceed the maximum load stated on the rating plate. Exceeding the rated load will damage the unit or shorten its life and will invalidate the guarantee.
The engine must not be run at speeds that exceed the maximum stated on the rating plate. Operating an engine at excessive speeds increases the hazard of personal injury.
Do not tamper with components, which may increase or decrease the governed speed.
Mains extension leads, mains supply leads, and all electrical equipment must be in good working condition.
Never operate electrical equipment with damaged or defective mains supply leads.
Keep the area around the generator clear of obstructions at all times. Never locate the generator against a building or near a canvas or plastic structure i.e. Tents etc.
Always use the correct fuel mix as stated in the user manual and on the rating plate.
To prevent fire, always stop the engine when refueling and never over fill the fuel tank.
Always clean up spilt fuel immediately using sand.
Do not use the generator in or near an explosive atmosphere.
To prevent an electric shock, never operate the machine in rain, snow or touch with wet hands.
Check the fuel system periodically for leaks. Seals and hoses should be checked for signs of deterioration or chafing. Check for loose or missing clamps damaged fuel tank or filler cap. All defects should be corrected before further use.
Always allow the generator to reach full operating speed before connecting any electrical load.
Always disconnect the electrical load before switching the generator off.
To prevent surging that may possibly damage electrical equipment, do not allow engine to run out of fuel while electrical loads are connected.
Before transporting the generator in a vehicle, drain all fuel to prevent spillage.
To prevent an electric shock and fire, never connect an electrical load with the electrical output switched on.
Do not connect the generator to any other electrical source.
Store the generator in a well-ventilated area with the fuel tank empty.

FUEL FILLING SAFETY INSTRUCTIONS

Warning!
Select bare ground for fuelling and move at least 10 feet (3m) from fuelling spot before starting the engine. After refuelling, properly tighten fuel cap; wipe off any spilled fuel and check for leakage.
Warning!
If fuel gets spilled on clothes, especially trousers, it is very important to change clothes immediately. Do not rely on evaporation.

Flammable quantities of fuel may remain on clothes after a spill for longer than expected.

Warning!

Vibrations can cause an improperly tightened fuel cap to loosen or come off and spill quantities of fuel. In order to reduce the risk of fuel spillage and fire, tighten fuel filler cap by hand as securely as possible. Before use always make sure that the fuel cap has been properly tightened. Check for fuel leakage while refuelling and during operation. If a fuel leak is suspected, do not start or run the engine until leak is fixed and spilled fuel has been wiped away.

Warning!

The ignition system of your unit produces an electromagnetic field of a very low intensity. This field may interfere with some pacemakers. To reduce the risk of serious or fatal injury, people with a pacemaker fitted should consult their physician and the pacemaker manufacturer before operating this tool.

Electrical Generator

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Operating an engine at excessive speeds increases the hazard of personal injury.

Do not tamper with components, which may increase or decrease the governed speed.

Mains extension leads, mains supply leads, and all electrical equipment must be in good working condition.

Never operate electrical equipment with damaged or defective mains supply leads.

Keep the area around the generator clear of obstructions at all times. Never locate the generator against a building or near a canvas or plastic structure i.e. Tents etc.

Always use the correct fuel mix as stated in the user manual and on the rating plate.

To prevent fire, always stop the engine when refueling and never over fill the fuel tank.

Always clean up spilt fuel immediately using sand.

Warning! Do not use the generator in or near an explosive atmosphere.

To prevent an electric shock, never operate the machine in rain, snow or touch with wet hands.

Check the fuel system periodically for leaks, seals and hoses should be checked for signs of deterioration or chafing. Check for loose or missing clamps, damaged fuel tank or filler cap. All defects should be corrected before further use.

Always allow the generator to reach full operating speed before connecting any electrical load.

Always disconnect the electrical load before switching the generator off.

To prevent surging that may possibly damage electrical equipment, do not allow engine to run out of fuel while electrical loads are connected.

Before transporting the generator in a vehicle, drain all fuel to prevent leakage.

To prevent an electric shock and fire, never connect an electrical load with the electrical output switched on.

Do not connect the generator to any other electrical source.

The engine speed has been factory set to provide safe operation. Tampering with the engine speed adjustment could result in overheating of attachments and could cause a fire. Never attempt to "speed-up" the engine to obtain more performance. Both the output voltage and frequency will be thrown out of standard by this practice, endangering attachments and the user.
Store the generator in a well-ventilated area with the fuel tank empty.

SYMBOLS

Read the manual

Wear ear protection

Wear eye and dust protection

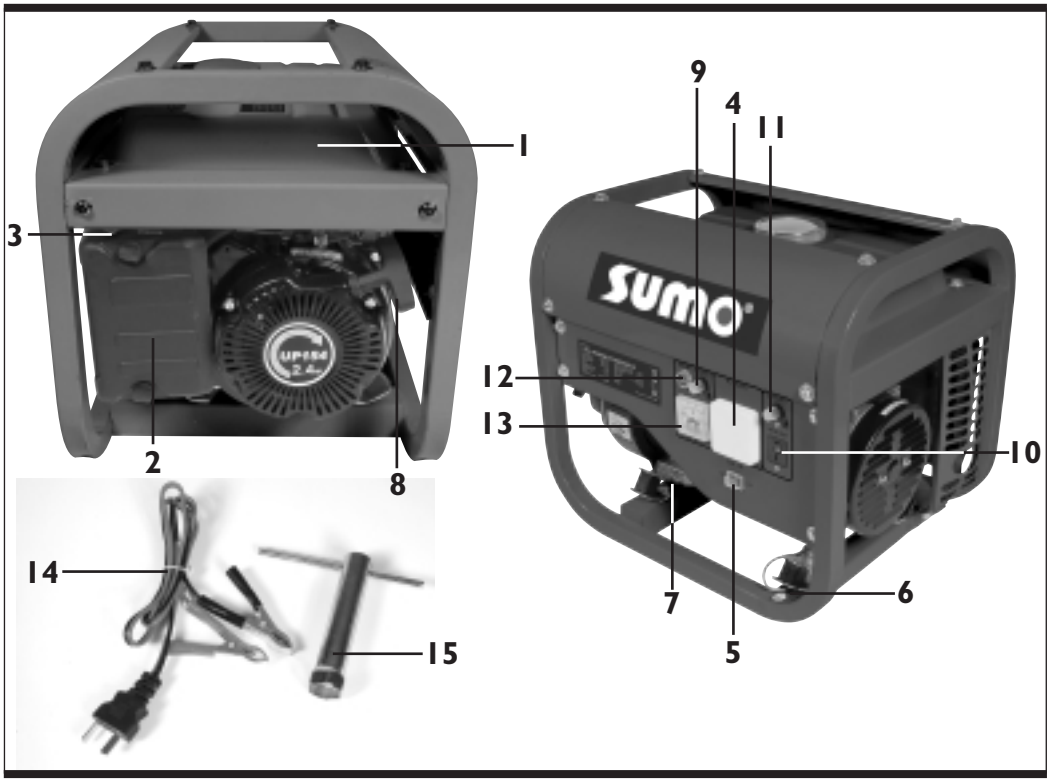
Warning

CAUTION: Hot exhaust, do not touch.

Connect the generator to earth using a suitable earth spike.

CAUTION: This is a 4 stroke engine. Fill with petrol only. Do not fill with diesel oil.

Allow motor to cool before opening the fuel cap. The vapour is extremely flammable and may ignite on contact with hot surface or flames.



1	Fuel tank
2	Air filter cover
3	Choke lever
4	AC socket
5	Engine switch
6	Ground (earth) terminal
7	Oil drain plug
8	Recoil starter
9	AC circuit breaker
10	DC Socket
11	DC circuit breaker
12	Pilot light
13	Voltmeter
14	DC charging leads
15	Spark plug spanner

TECHNICAL DATA

AC output	230Vac ~ 50Hz
Rated power	0.9kVA
Peak power	1.1KvA
Phase	Single
Power factor	cosø=1
Displacement	87cc
DC output	12V, 5.3A
Motor	2.2HP, 4 stroke
Fuel tank capacity	6L
Fuel type	Unleaded Petrol
Oil type	SAE 10W-30
Spark plug type	E6TC

NOISE DATA

Sound power level declared	93dB

The figures quoted are emission levels and are not necessarily safe working levels. Whilst there is a correlation between the emission and exposure levels, this cannot be used reliably to determine whether or not the actual level of exposure of the workroom, the other sources of noise etc. i.e. the number of machines and the adjacent processes and the length of time for which an operator is exposed to the noise. Also the permissible exposure level can vary from country. This information however, will enable the user of the machine to make a better evaluation of the hazard and risk. The supplier recommends the use of ear protection at all time.

Fig 2

OPERATION INSTRUCTIONS

Warning: Before using your generator be sure to read the instruction manual carefully.

1. LOCATION & GROUNDING

Before using this generator it must be prepared correctly before use. Locate the generator on firm level ground away from buildings or other structures ensuring that the exhaust is not obstructed.

Warning: It is advisable to properly earth-ground your generator before starting using a wire and a small earth stake.

Note: The wire and earth stake are not supplied with the unit.

Earth Spike and Cable can be purchased at your local camping supplies, or alternatively an Earth spike can be made, and it is suggested you get advice from a registered electrical trades person. To make a Spike use a Copper tube or Copper Rod 12mm diameter, a minimum length of 200mm and with an M6 Machine screw one end. The cable used should be a Maximum length of 1 metre and a Minimum of 1.0mm2 to carry a 10amp load. The cable should be attached to the Generator at the Earth point (See fig 2) and to the Spike between a flat washer and the Copper with a lock washer under the head of the M6 Machine screw in a similar fashion to the Earth point screw on the generator.

When placing the Spike into the ground the Generator must not be running and it is suggested that the Spike is pushed into the ground by at least 100mm so that it is firm and a litre of water poured around it to ensure good Earth continuity.

2. CHECKING THE OIL

Warning: the generator is supplied without oil and must be filled before first use, failure to do so will invalidate your guarantee.

Before checking or refilling oil, be sure the generator is put on a stable and level surface with the engine stopped.
Remove the oil filler cap and check the engine oil level (See fig 3).
If oil level is below the lower level line, refill with suitable oil to upper level line. Do not screw in the oil filler cap when checking oil level.
Change the oil according to the maintenance schedule on page 15 or if contaminated.

Fig 3

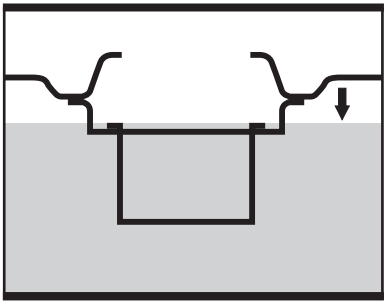


Fig 4

3. FUELING

Check fuel level. If fuel level is low, refill with unleaded petrol. Be sure to use the fuel filter screen on the fuel filter neck.
Recommended fuel: Unleaded petrol. The fuel tank should not be filled above the top of the fuel filter as shown in Fig.4. The fuel level can be checked using the gauge on top of the fuel tank.

Fig 5

4. STARTING THE GENERATOR ENGINE

Before starting the engine make sure that all the electrical loads are disconnected from the generator AC outlet sockets. Turn the fuel tap lever to the ON position (See Fig 5).
Set the choke lever to “Choke” position.
Turn the engine ON/OFF switch to the ON position (See Fig 6).

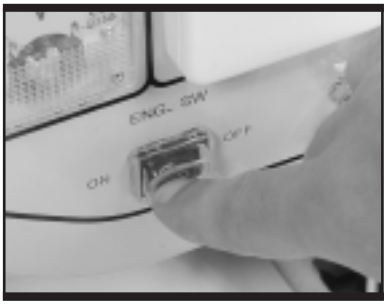


Fig 6

Fig 7

Hold down the generator firmly with one hand on the frame. With the other hand grip the recoil starter cord handle (See Fig 7) and pull slowly until resistance is felt indicating that the recoil starter is engaged. When resistance is felt pull the cord sharply. Continue this procedure until the engine starts.

When the engine has been successfully started and is running smoothly return the choke lever to the RUN position.

Warning! Before connecting any electrical load to the generator ensure that the load does not exceed the maximum load as stated on the rating plate. Ensure that the mains supply lead is long enough to reach the generator without any strain.

When the generator engine has been successfully started and is running smoothly connect the electrical load into the generator AC output socket.

5. STOPPING THE GENERATOR ENGINE

Before stopping the engine make sure that all the electrical loads are disconnected from the generator AC outlet sockets. Turn the generator ON/OFF switch to the OFF position.

When the generator engine has stopped and before storage, turn the fuel tap lever to the OFF position.

Fig 8

Fig 9

6. OVER LOAD PROTECTION

The generator is fitted with 2 overload protection devices located on the control panel. In the event that the load exceeds that stated on the rating plate, the overload protection will operate and disconnect the load. If the overload protection device is tripped Check the electrical load and if necessary reduce the load. The d.c. overload protection device can be re-set by pressing in the re-set button (See Fig 8). The a.c. overload protection device can be re-set by pressing in the re-set button (See Fig 9).

7. DC BATTERY CHARGING FUNCTION

This function is applicable to 12V battery charging only.
Disconnect the leads from the battery.
Loosen the vents on the battery.
Make sure the battery fluid level is correct
Using a hydrometer measure the specific gravity of the battery fluid and calculate the charging time in accordance with the table shown in Fig 10.
Attach the 12v charging leads to the battery observing correct polarity (Red = + Positive) (black = - Negative).
Plug the 12v charger lead into the socket on the generator (Fig 11).
The specific gravity for the fully charged battery shall be within 1.26 to 1.28. It is advisable to check the specific gravity every hour.

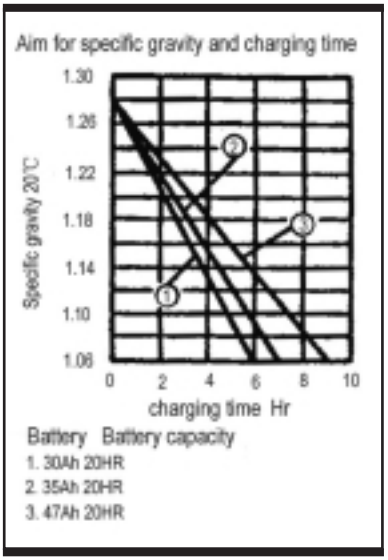


Fig 10

Fig 11

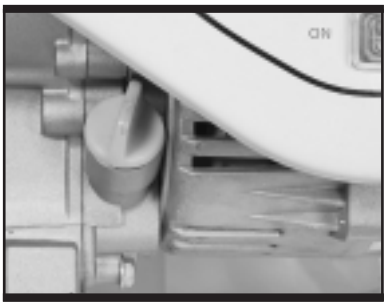


Fig 12

MAINTENANCE

Engine oil replacement

Place the machine on a level surface and warm up the engine for several minutes. Then stop the engine.
Remove the oil filler cap (See Fig 12).

Fig 13

Fig 14

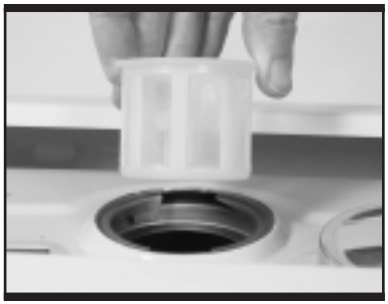


Fig 15

Place an oil pan under the engine. Remove the oil drain plug (See Fig 13) so that the oil can be completely drained.
Check the oil drain plug, gasket, oil filler cap and O-ring and if damaged replace.
Reinstall the oil drain plug.
Add engine oil to the upper level.

Spark plug

After every 50 hours of running the spark plug should be removed. Check the colour of the deposits on the end of the spark plug, it should be a "Tan" colour. Remove all deposits using a stiff brush a brass wire brush is ideal (See Fig.14). Check the spark plug gap and adjust if required. The correct gap should be 0.7 to 0.8mm.

Air filter

After every 50 hours of running or every 3 months, the air filter should be removed, examined for deterioration and cleaned. Clean the air filter thoroughly using an environmentally friendly water based degreasing agent. Refit the air filter when it has dried out fully. Warning! Never run the engine without the air filter.

Fuel tank filter

Remove the fuel tank filler cap and the filter (Fig 15), clean the filter thoroughly using an environmentally friendly water based degreasing agent and re-fit.

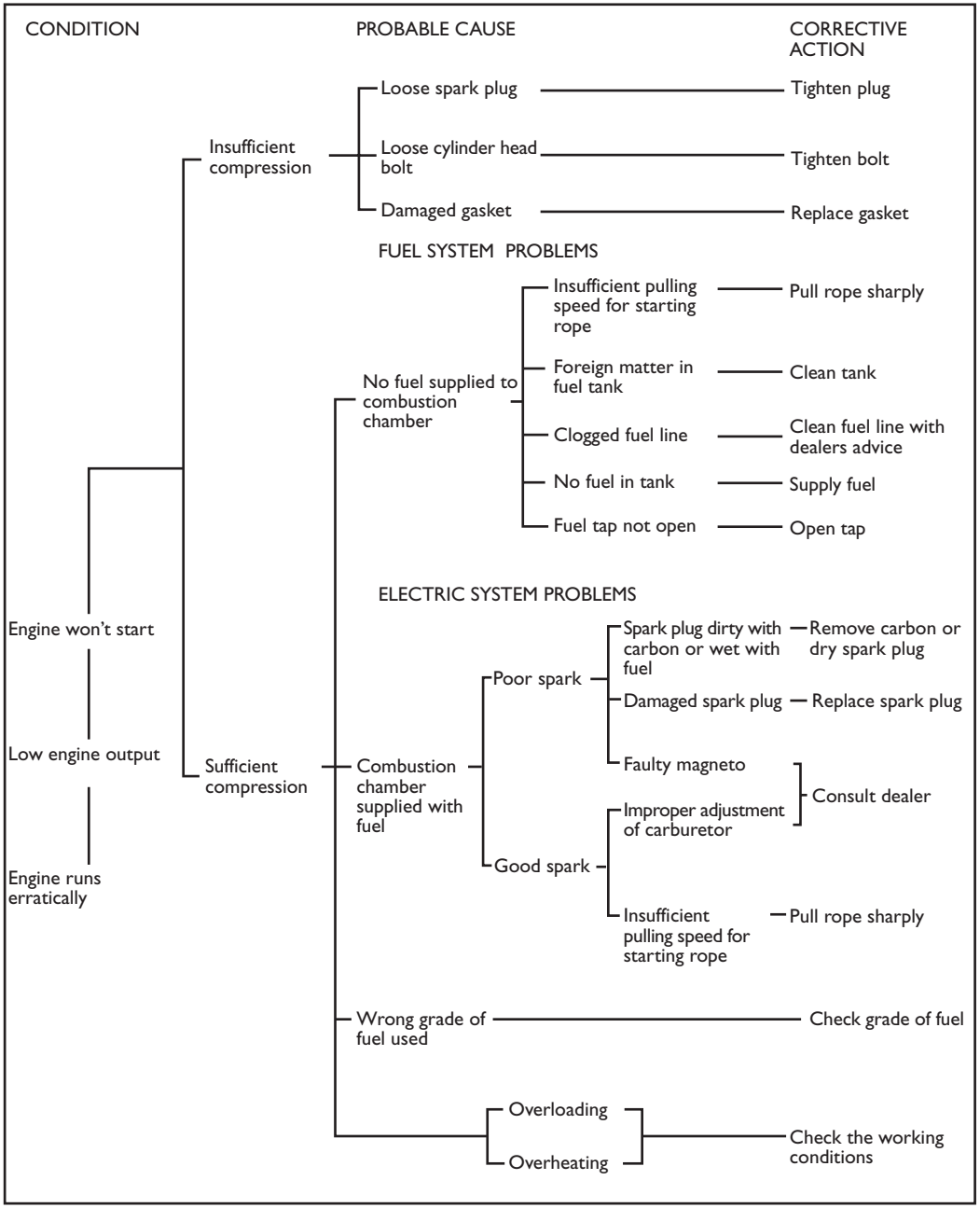
STORAGE

If the generator is not to be used or is to be stored for more than one month the following storage procedure should be carried out. Drain all the fuel from the fuel tank and the carburettor, ensure that all the fuel has been removed. Remove the spark plug and pour approximately one tablespoon full of clean engine oil into the spark plug hole. With the ignition turned OFF gently pull on the recoil starter cord several times. Re-fit the spark plug and continue to pull the recoil starter cord until the piston is on the compression stroke (when resistance is felt), then stop pulling.
Store the generator in a dry well ventilated place under a cover to prevent any dust or debris from accumulating on the generator

MAINTENANCE SCHEDULE

Item	Remark	Pre-operation check (daily)	Initial 1 month or 20hours	Every 3 month or 50 hours	Every 6 month or 100 hours	Every 12 month or 300 hours
Spark plug	Check condition Adjust gap and clean Replace if required			●		
Engine Oil	Check oil level	●				
	Replace		●		●	
Air filter	Clean. Replace if required.			●		
Fuel Filter	Clean fuel cock filter. Replace if required.				●	
Valve Clearance	Check and adjust when engine is cold.					●
Fuel line	Check fuel hose for cracks or damage. Replace if required	●			●	
Exhaust system	Check for leakage. Tighten or replace gasket if required.	●				
	Check exhaust screen. Clean and replace if required.				●	
Carburetor	Check choke operation	●				
Cooling system	Check fan damage					●
Starting system	Check recoil starter operation	●				
Decarbon-isation	More frequently if necessary					●
Fittings/ Fastenings	Check all fittings and fixtures and tighten if required				●	

ENGINE TROUBLE SHOOTING



GENERATOR TROUBLE SHOOTING

CONDITION	PROBABLE CAUSE	CORRECTIVE ACTION
No AC output	Tripped circuit breaker	Reset
	Poor connection or faulty lead	Check and repair
	Broken recepticle	Check and repair
	Faulty circuit breaker	Check and repair
No AC output	Generator problem	Check and repair
Output power too high or low	Engine RPM set too high or low	No load speed set to 3150rpm
	Loose component	Locate and tighten
	Internal generator problem	Consult dealer

SPARES HELPLINE

01302 721791

ENVIRONMENTAL PROTECTION

Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. For further information visit www.recycle-more.co.uk

1100w PORTABLE GENERATOR SMK36GEN

Declaration of Conformity

We, Importer
Powersmith Ltd.
BA22 8RT

Declare that the product
1100W Generator
SMK36GEN

Complies with the essential health and safety requirements of the following directives:
89/336/EEC - EMC Directive.
2006/95/EC - Low Voltage Directive.
98/37/EEC - Machinery Directive.
2000/14/EC - Noise Directive.

Standards and technical specifications referred to:
EN 55014-1: 2000/+A1: 2001/+A2:2002
EN 55014-2: 1997/+A1:2001
EN 61000-3-2: 2000/+A2: 2005
EN 61000-3-3: 1995/+A1: 2001
EN 61000-3-11: 2000
EN 1012-1: 1996
EN60204-1: 1997

Authorised Signatory

Date: 22/08/07

Signature:

Name: Peter Harries
Powersmith Ltd.
Quality Manager

ISSUE 01. 09/07